

AMENDED WORK PLAN
FOR
WORK ASSIGNMENT NO. 0-292
IRONBOUND ATHLETIC FIELD
DECEMBER 3, 2007

**WORK PLAN
IRONBOUND ATHLETIC FIELD**

**Prepared for
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY (EPA)/
ENVIRONMENTAL RESPONSE TEAM (ERT)**

Date: December 3, 2007
Contract No: EP-C-04-032
Assignment No.: 0-292.1

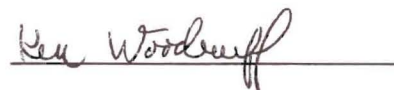
Approval:

REAC Task Leader



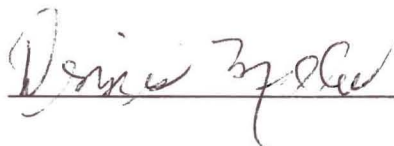
Date: 12/5/07

**REAC Group Leader
(Cost Model Review)**



Date: 12/05/07

REAC Program Manager



Date: 12/5/07

**Lockheed Martin REAC
GSA Raritan Depot
2890 Woodbridge Avenue
Building 209 Annex
Edison, New Jersey 08837-3679**

Work Assignment Number:	0-292.1
Work Assignment Title:	Ironbound Athletic Field
Work Assignment Manager:	Rajeshmal Singhvi
Lockheed Martin REAC Task Leader:	Martin Ebel
Duration:	October 29, 2007 through May 31, 2008
Contract Number:	EP-C-04-032
Site ID:	024N

INTRODUCTION

Purpose. The purpose of the Work Assignment (WA) is to determine the source of the lead that the New Jersey Department of Health and Senior Services (NJDHSS) discovered on artificial turf at ball fields in Newark, New Jersey. Representatives of the NJDHSS collected soil and fiber samples from the artificial turf on the athletic fields. Both the soil and turf samples contained elevated concentrations of lead. Amendment 1 changes the title.

Background. The Site is located at 25 St. Charles Street in a mixed residential and commercial portion of Newark, Essex County, New Jersey. The property is a long narrow parcel, approximately 2.5 acres in size, bordered by Conrail to the North, St. Charles Street to the west and the Ironbound Recreational Center (IRC) to the south. Relatively new residences line the opposite end of St. Charles Street and the adjoining streets. The closest residence is approximately 100 feet from the Site. A number of industrial facilities are present north of the Site. The ball fields are on a triangular property with a soccer field in the northern portion and baseball field in the south. Both fields are covered with artificial turf and the remainder of the site includes two parking lots. The ball fields are immediately south of the former Tidewater Bailing facility, a known contaminated site.

Previous investigations at Tidewater Bailing indicated that the site is contaminated with elevated concentrations of metals, polychlorinated biphenyls (PCBs) and petroleum hydrocarbons. The high concentrations of lead contamination at Tidewater Bailing led to suspicion that it could be the source of lead contamination at the adjacent athletic field. Because lead was also found in a sample of artificial turf, the turf itself is being considered a source of the lead contamination.

Assumptions. The following assumptions were made during the development of this work plan (WP):

- The Work Assignment Manager (WAM) will serve as the liaison to the general public and other agencies during implementation of this WA.
- Any personal protective equipment (PPE) generated during site work will be bagged and disposed of properly.
- Up to 20 soil samples, five vacuum dust samples, five artificial turf and 10 mat samples will be collected for analysis. One duplicate will be collected for the soil matrix.
- A Scribe database is required.
- The total field effort will not exceed one day.

TECHNICAL APPROACH

REAC personnel have been tasked to accomplish the following:

Task 1: Pre-Field Work Activities. A Work Plan (WP), Quality Assurance Project Plan (QAPP) and Health and Safety Plan (HASP) will be prepared and submitted for this project. The final QAPP will be completed within 30 days of WA receipt but will be available in draft format before the site investigation begins. The HASP will be prepared, reviewed, approved and implemented before site activities are conducted. The WP will be prepared and submitted within 30 days of WA receipt.

Task 2: XRF Screening. A field portable x-ray fluorescence (XRF) unit will be used to initially screen bare soil in-situ and artificial turf for lead at sample locations selected in the field. Approximately 20 to 25 turf locations and up to 20 soil locations will be screened. Select XRF locations will then be sampled. Every effort will be made not to disturb areas within the normal playing field.

Task 3: Soil, Dust and Turf Sampling. Up to 20 soil samples will be collected from outside of the area covered with artificial turf including the perimeter of the site and the baseball infield. One duplicate will be collected for every 20 samples. Five samples of artificial turf will be collected. Dust samples will be collected from a measured area from the turf surface. A small piece of turf will be cut, removed and separated from the mat and containerized separately. The soil exposed by the turf sampling will also be collected, if available. A total of four separate samples (dust, turf, mat 1 and mat 2) may be collected at each turf location. All samples will be submitted under chain of custody record to the ERT/REAC Laboratory in Edison, New Jersey for lead and/or PCB analysis.

Task 4: Lead and PCB Analysis. REAC chemists will analyze dust, turf, mat and soil samples for lead and/or PCBs. The turf samples will be washed with deionized water several times until the water runs clear and then allowed to air dry prior to analysis. Lead analysis will be conducted on a portion of the whole turf sample (fibers and backing) and also on the fibers themselves to isolate the source of the lead. The mat samples will be cut into small pieces prior to digestion. All analytical data will be validated by REAC QA/QC chemists prior to release.

Task 4: Investigation Derived Wastes. Investigation-derived wastes expected to be generated during this project will be PPE and disposable sampling equipment. These materials will be bagged and removed from the site.

Task 5: Surveying. The horizontal coordinates of all monitoring and sample locations will be recorded using global positioning system (GPS) survey equipment.

Task 6: Trip Report. A Trip Report will be prepared and submitted within four weeks after receipt of the Analytical Report. The Trip Report will summarize the methodologies employed, results of the field effort, and recommendations for future actions (if deemed necessary). Analytical results will be summarized in tabular format. Maps and figures will also be provided for illustrative purposes.

Hazards. During work at the site, REAC personnel may be exposed to a number of occupational and environmental hazards. These are covered in detail in the site Health and Safety Plan (HASP). The primary environmental hazard anticipated during field sampling is exposure to lead. All personnel entering the site will be required to read, understand and sign the HASP prior to initiating any work at the site.

Quality Assurance Project Plan. Project management, measurement, assessment, and usability elements applicable to this WA are included in the site-specific Quality Assurance Project Plan (QAPP).

Standard Operating Procedures. Standard Operating Procedures (SOPs) and Administrative Procedures (APs) relevant to this WA are included in the project-specific QAPP. REAC personnel will adhere to the following REAC Health & Safety SOPs for this WA:

- #3001, REAC Health and Safety Program Policy and Implementation*
- #3010, REAC Personal Safety/Protective Equipment*
- #3012, REAC Health and Safety Guidelines at Hazardous Waste Sites*
- #3020, Inclement Weather, Heat Stress and Cold Stress*

STAFFING PLAN AND SCHEDULE

Staffing Plan. The REAC Task Leader (TL) will maintain contact with the WAM to provide information on the technical and financial progress of this project. This communication will begin with the issuance of the WA. Activities will be summarized in appropriate format for inclusion in REAC Monthly Reports.

The WA was received on October 29, 2007. The WP was initiated within 30 days after receiving the WA. The project will be completed by May 31, 2008.

The REAC TL/Quality Control (QC) Coordinator is the primary REAC point of contact with the WAM. The TL is responsible for the development and completion of the WP and QAPP, project team organization and supervision of all project tasks including reporting and deliverables. In addition, the QC Coordinator is responsible for ensuring adherence to the WP and QAPP and recording any deviations on a Work Assignment Field Change Form.

The REAC Quality Assurance Officer (QAO), the Health and Safety Officer, the Analytical Section Leader and the Operations Section Leader are responsible for auditing and guiding the project team, reviewing and auditing the deliverables, and proposing corrective action, if necessary, for nonconformity to the WP, QAPP or the site HASP.

The following REAC personnel may work on this project:

<u>Personnel</u>	<u>Responsibilities</u>	<u>Level</u>
Task Leader	Project Supervision/Field Investigation/Sampling/ Deliverable Preparation	P3
Sr. Inorganic Chemist	Onsite XRF Measurements/ICP Analysis	P4
Inorganic Chemist	Sample Preparation	P2
Environmental Scientist	Dust Sampling	P3
QA/QC Chemists	Data Validation/Analytical Report Preparation	P3/P4
AutoCAD/GIS	Map/Graphics Generation	P2
QAO	Field Sampling/Deliverable Review/Validation Oversight	P4
Group Leader	Project, WP and QAPP Review	P4
Program Manager	Project, WP and QAPP Review	P4
Administrative Support	Deliverable Copying/Distribution/Archival	T3
Analytical Chemist	Sample Receiving	P1

Other REAC technical and/or administrative personnel may work on this project as needed.

Schedule of Activities. The schedule of activities and deliverables is as follows:

<u>Task/Deliverable</u>	<u>Date</u>
Draft QAPP	November 1, 2007
Field Investigation	November 1, 2007
Final QAPP	November 21, 2007
Analytical Report	November 26, 2007
Amended Work Plan	December 3, 2007
Trip Report	November 21, 2007

All project deliverable/task dates are estimates based on the information available at the time of WP completion. New information, additional tasks and events outside REAC control may result in revisions to these dates.

In conformance with the requirements of the REAC contract, all deliverables and other relevant project information will be submitted in electronic format to the appropriate ERT-Information Management System (IMS) website. Submission of the deliverables to the ERT-IMS website will be considered delivery to the WAM as of the date and time such deliverables are received on the website.

LEVEL OF EFFORT AND COST PROJECTIONS

The estimated costs, including labor and travel, to complete this WA are given in the attached cost summary sheet. Computer graphics, photo documentation, and administrative support will be required to accomplish WA objectives. Labor hours for these activities are included in the cost estimate.

Vendor Services. No vendor services are required for this WA.

Travel Assumptions. Travel assumptions are:

Number of trips from Edison, NJ to Newark, NJ	1
Number of days/trip	1
Number of personnel	3 per trip